

Claims

1. A dilator for use in surgery having an outer surface for insertion into an access hole formed in a patient for stretching the tissue adjacent to the access hole so as to enlarge the same wherein said outer surface is ovoid shaped.

2. A dilator for use in surgery having an outer surface for insertion into an access hole formed in a patient for stretching the tissue adjacent to the access hole so as to enlarge the same as claimed in claim 1 wherein said dilator includes a proximal end and a distal end, and a tool engaging surface at the proximal end and a beveled portion at the distal end.

3. A dilator for use in surgery having an outer surface for insertion into an access hole formed in a patient for stretching the tissue adjacent to the access hole so as to enlarge the same as claimed in claim 2 wherein said dilator is one of a series of a plurality of dilators, each of said plurality of dilators and including said dilator having an elliptical shape in cross section

and the minor axis of each succeeding dilator being progressively larger than the proceeding dilator and each of said series of dilators having a straight through bore that is dimensioned to complement the next succeeding dilator and each of said dilators of said plurality of dilators are mounted in said
5 straight through bore of the next succeeding dilator.

4. A dilator retractor for use in surgery having a main elongated body defining a straight through bore for fitting over a dilator and said dilator retractor being inserted on a target located at the area where the surgery is being performed and remaining in position of a patient when the dilator is
10 removed and for use by a surgeon for performing the surgery, said dilator retractor having a distal end portion, said distal end portion being contoured to match the bone structure of the patient at said target.

5. A dilator retractor for use in surgery as claimed in claim 4 wherein said contour is defined by a slope.

6. A dilator retractor for use in surgery as claimed in claim 4 wherein said contour is defined by a tunnel.

7. A dilator retractor for use in surgery having a main elongated body defining a straight through bore for fitting over a dilator and said dilator retractor being inserted on a target located at the area where the surgery is being performed and remaining in position of a patient when the dilator is removed and for use by a surgeon for performing the surgery, wherein said main elongated body is other than circular in cross section.

8. A dilator retractor for use in surgery as claimed in claim 7 wherein said elongated body has a distal end, said distal end being contoured to accommodate the shape of the bone structure at said target of the patient.

9. A dilator retractor for use in surgery as claimed in claim 8 wherein said contour is defined by a slope.

10. A dilator retractor for use in surgery as claimed in claim 8 wherein said contour is defined by a tunnel.

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11. A dilator retractor for use in surgery having a main elongated body defining a straight through bore for fitting over a dilator and said dilator retractor being inserted on a target located at the area where the surgery is being performed and remaining in position of a patient when the dilator is removed and for use by a surgeon for performing the minimal invasive surgery, wherein said main elongated body is elliptical in cross section.

12. A dilator retractor for use in surgery as claimed in claim 11 wherein said elongated body has a distal end, said distal end being contoured to accommodate the shape of the bone structure at said target of the patient..

13. A dilator retractor for use in surgery as claimed in claim 12 wherein said contour is defined by a slope.

14. A dilator retractor for use in surgery as claimed in claim 12 wherein said contour is defined by a tunnel.

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5 15. In combination, a plurality of dilators and a dilator retractor, for use in performing surgery, each of said plurality of dilators having an ovoid shaped outer surface for fitting over the next preceding dilator of said plurality of dilators for insertion into an access hole formed in a patient for stretching the tissue adjacent to the access hole so as to enlarge the same, said dilator retractor having a complimentary ovoid shaped outer surface and dimensioned to fit over the last of said plurality of dilators and to remain in said patient when said dilators are removed whereby the dilator retractor is used by the surgeon to perform the surgery.

10 16. In combination, a plurality of dilators and a dilator retractor as claimed in claim 15 wherein said dilator retractor is selected from a series of dilator retractors that have different lengths whereby the length selected matches the depth of cavity of the patient where the dilators were removed.

15 17. A series of dilator retractors for use in surgery having a main elongated body defining a straight through bore for fitting over a dilator and said dilator retractor being inserted on a target located at the area where the

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surgery is being performed and remaining in position of a patient when the dilator is removed and for use by a surgeon for performing the surgery, each of said series of dilator retractors having a different length, each of said dilator retractor having a distal end portion, said distal end portion being contoured to match the bone structure of the patient at said target and one from said series being selected for use in the patient whose length matches the depth of cavity formed by the dilator.

18. A dilator retractor for use in surgery as claimed in claim 17 wherein said contour is defined by a slope.

19. A dilator retractor for use in surgery as claimed in claim 17 wherein said contour is defined by a tunnel.

20. A dilator retractor for use in surgery having an outer surface for insertion into an access hole formed in a patient by dilators used for stretching the tissue adjacent to the access hole so as to enlarge the same wherein said outer surface of said dilator retractor is funnel shaped and the larger diameter of the funnel shape is at the proximal end thereof whereby the dilator retractor serves as a working channel for the surgeon to perform the surgical procedure.